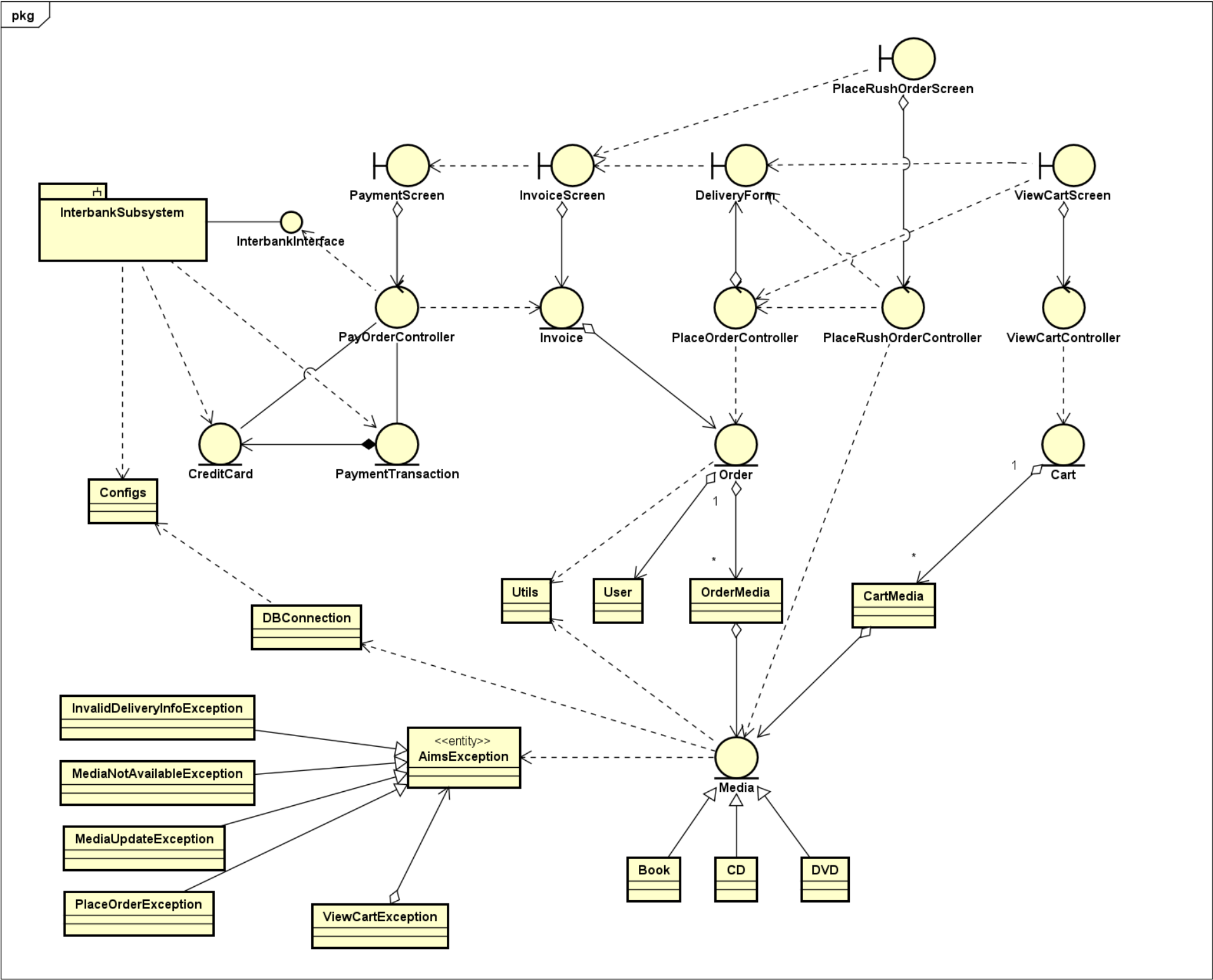
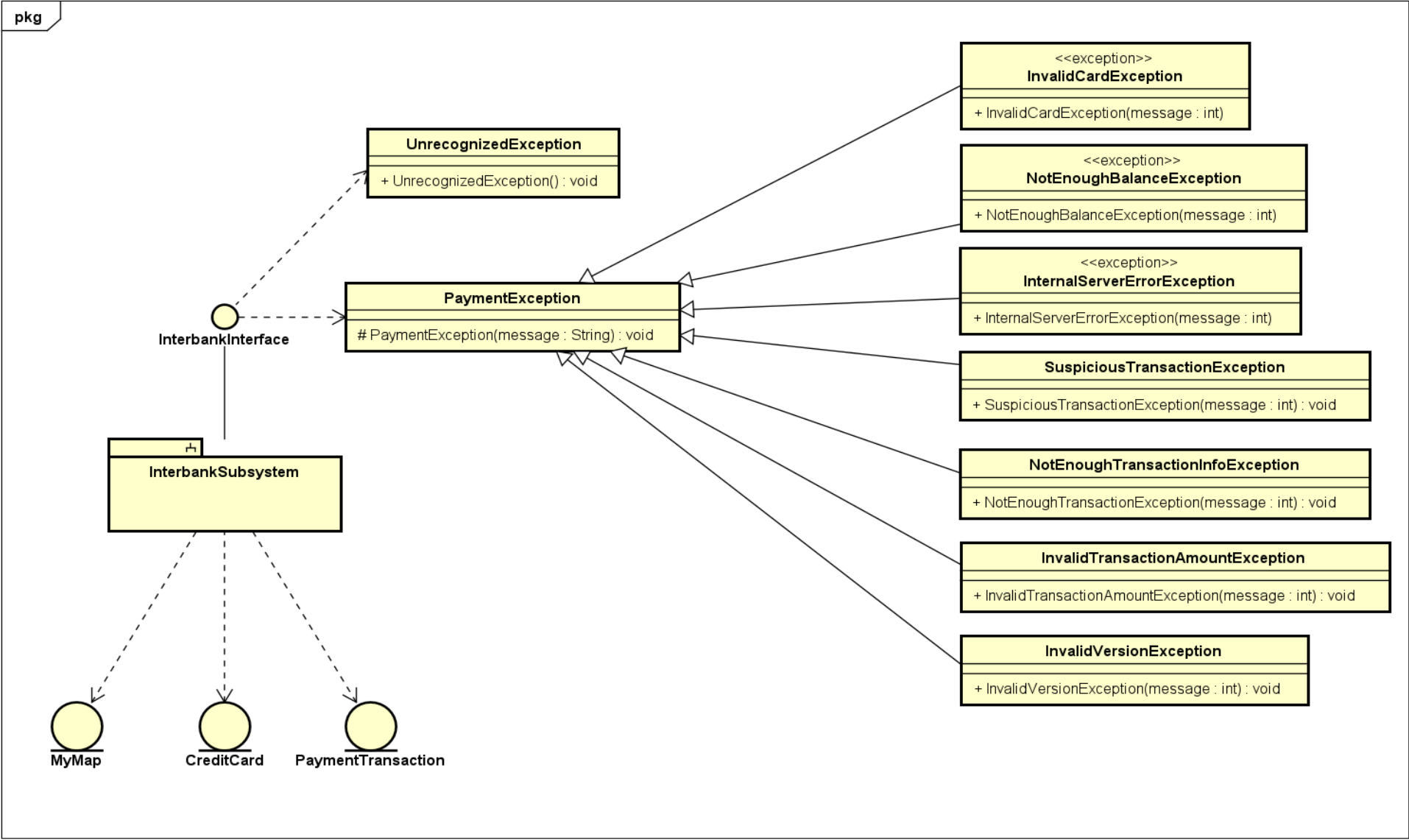


CLASS DESIGN

1. Define relationships between classes



2. Class design

2.1Class “InterbankInterface”

<<interface>> InterbankInterface	
+ <<exception>> payOrder(card : CreditCard, amount : int, content : String) : PaymentTransaction	

Attribute

None

Operation

Name	payOrder
Description(purpose)	Pay order, and return the payment transaction
Parameter	card – the credit card used for payment amount – the amount to pay content – the transaction content
Exception	PaymentException – if responded with a pre-defined error code UnrecognizedException – if responded with an unknown error code or something goes wrong
Return type	PaymentTransaction
Method	None
State	None

2.2 Class “PaymentController”

<<control>> PayOrderController	
- card : CreditCard - interbank : InterbankInterface	
+ payOrder(amount : int, content : String, cardNumber : String, cardHolderName : String, expirationDate : String, securityCode : String) : Map<String,String> - getExpirationDate(date : String) : String	

Attribute

#	Name	Data type	Default value	Description
1	card	CreditCard	NULL	Represent the card used for payment
2	interbank	InterbankInterface	NULL	Represent the Interbank subsystem

Operation

#	Name	Return type	Description (purpose)
1	payOrder	Map<String,String>	Pay order, and then return the result with a message

Parameter

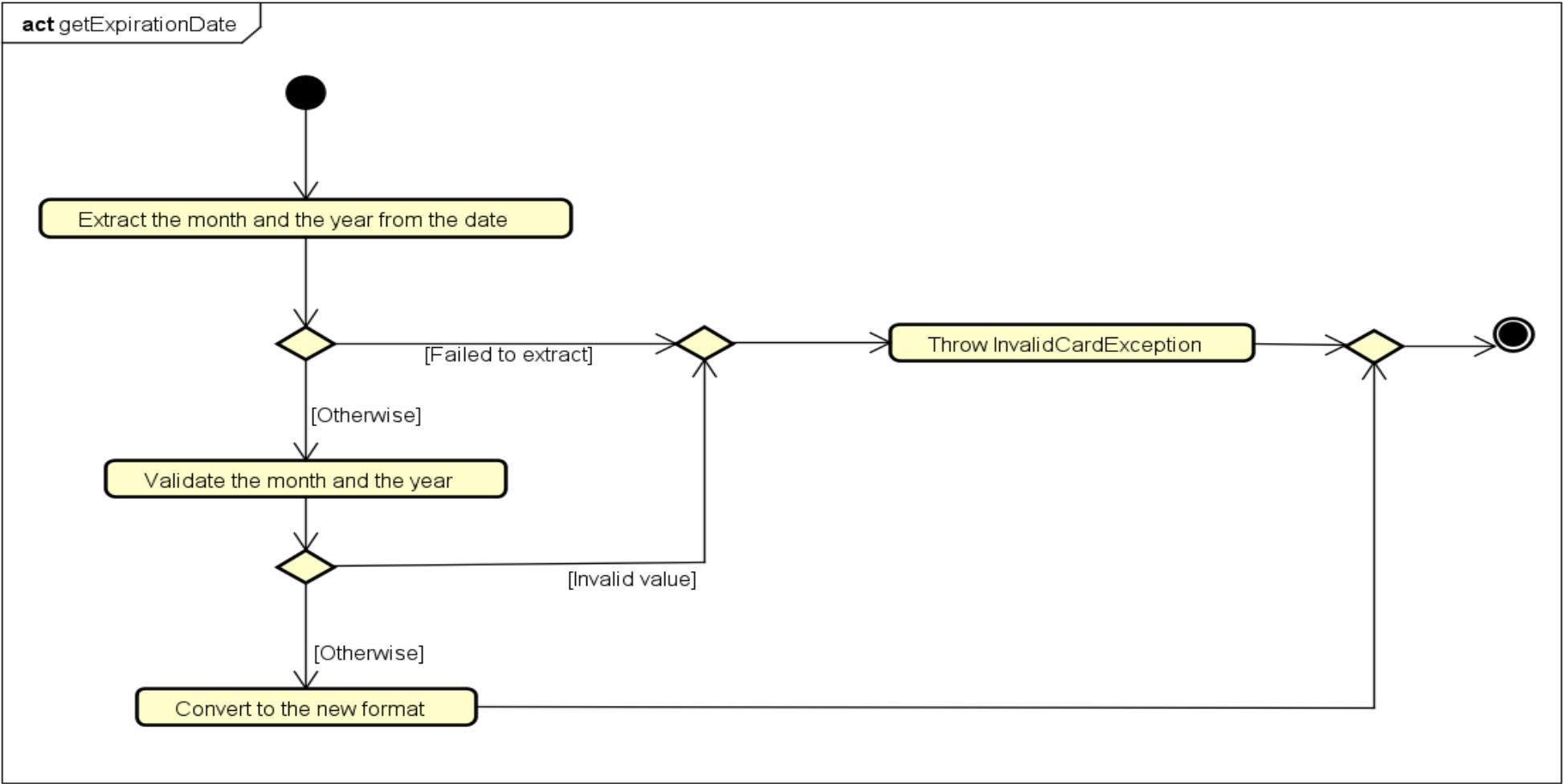
- amount – the amount to pay
- content – the transaction contents
- cardNumber – the card number
- cardHolderName – the card holder name
- expirationDate – the expiration date in the format “mm/yy”
- securityCode – the cvv/cvc vode of the credit card

Exception

None

Method

- getExpirationDate: Given the String “date” representing the expiration date in the format "mm/yy", this method convert it into the required format “mmyy.” The algorithm is illustrated as follows

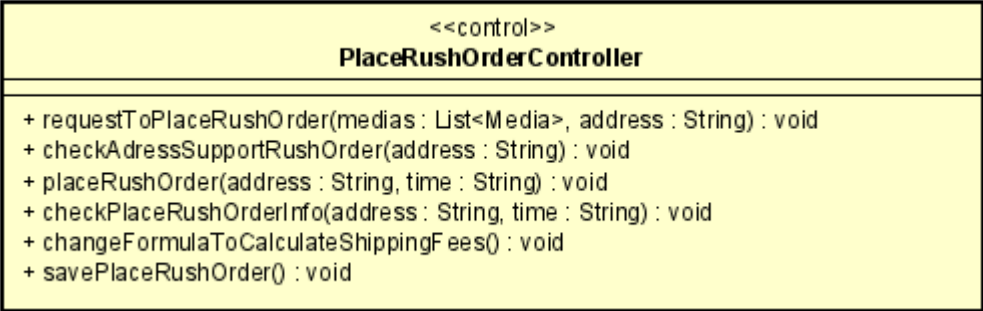


State

None

3. Class Design for “Place Rush Order”

3.1Class “PlaceRushOrderController”



Attribute

None

Operation

Name	requestToPlaceRushOrder
Description(purpose)	User request to place rush order, then system checks if there is media and address that supported to place rush order
Parameter	- medias – the media/list of medias that the customer chose to buy from cart - address – the address that the customer entered at the delivery form.
Exception	None
Return type	None
Method	None
State	None

Name	checkAddressSupportRushOrder
Description(purpose)	Check if the shipping address is supported to place rush order
Parameter	address - the address that the customer entered at the delivery form.
Exception	None
Return type	Boolean
Method	None
State	None

Name	placeRushOrder
Description(purpose)	Request to place rush order after the customer updates the rush order information
Parameter	- address – the address that user update at the place rush order screen

	- time – the expected delivery time that the customer entered at the rush order screen
Exception	None
Return type	None
Method	None
State	None

Name	checkPlaceRushOrderInfo
Description(purpose)	Check the place rush order info: delivery information for rush order, delivery instructions and expected delivery time interval
Parameter	- address – the address that user update at the place rush order screen - time – the expected delivery time that the customer entered at the rush order screen
Exception	None
Return type	None
Method	None
State	None

Name	changeFormulaToCalculateShippingFees
Description(purpose)	Change the formula to calculate the shipping fees
Parameter	None
Exception	None
Return type	None
Method	None
State	None

Name	savePlaceRushOrder
Description(purpose)	Save the place rush order information
Parameter	None
Exception	None
Return type	None
Method	None
State	None

4. Class Diagram

